

AMENDMENTS TO THE CLAIMS

The below listing of claims replaces all prior versions, and all prior listings, of claims in the application.

Listing of Claims:

1. (Original) A steering system for an outboard motor mounted on a stern of a boat and having an internal combustion engine at its upper portion and a propeller with a rudder at its lower portion powered by the engine to propel and steer the boat, comprising:

a swivel shaft connected to the propeller to turn the propeller relative to the boat;

an actuator connected to the swivel shaft to rotate the swivel shaft; and

a swivel case rotatably accommodating the swivel shaft, the swivel case being formed with a recess having a box-like shape to accommodate the actuator therein in such a manner that the actuator does not project outside a profile of the outboard motor, obtained by looking down the outboard motor from above in the vertical direction, regardless of a steered angle of the outboard motor.

2. (Original) A system according to claim 1, wherein the actuator is accommodated in the recess in such a manner that a longitudinal direction of the actuator is positioned on a diagonal of a rectangle of the recess.

3. (Currently Amended) A system according to claim 1, wherein the actuator is accommodated in the recess ~~by supported by~~ supports comprising a first support that supports the actuator at its upper portion thereof and a second support that supports the actuator at its lower portion thereof.

4. (Original) A system according to claim 1, further including: a rotation angle sensor outputting a signal indicative of an angle of rotation of the swivel shaft; and

a controller controlling operation of the actuator based on at least the signal of the rotation angle sensor; and

wherein the rotation angle sensor is installed in the recess.

5. (Original) A system according to claim 1, further including:

a rotation angle sensor that outputs a signal indicative of an angle of rotation of the swivel shaft; and

a controller that controls operation of the actuator based on at least the signal of the rotation angle sensor; and

wherein the rotation angle sensor is installed around an outer periphery of the swivel shaft.

6. (Original) A system according to claim 5, wherein the rotation angle sensor has a ring-like shape and is installed around the outer periphery of the swivel shaft in such a manner that a center of the rotation angle sensor is made equal to a center of rotation of the swivel shaft.

7. (Original) A system according to claim 5, wherein the rotation angle sensor comprises magnets having a ring-like shape fastened to the outer periphery of the swivel shaft and a detection coil fastened to an inner periphery of the swivel case.

8. (Original) A system according to claim 1, wherein the actuator is a hydraulic cylinder and including:

a hydraulic pressure supplier that supplies hydraulic pressure to the hydraulic cylinder;

and

a hydraulic pressure reliever that relieves hydraulic pressure when change of hydraulic pressure of the hydraulic pressure supplier exceeds a predetermined value.

9. (Original) A system according to claim 8, wherein the hydraulic pressure reliever comprises:

a moving orifice installed in the hydraulic pressure supplier; and

a relief oil path installed in the hydraulic pressure supplier connecting hydraulic pressure to an oil tank.

10. (Currently Amended) A steering system for an outboard motor mounted on a stern of a boat and having an internal combustion engine at its upper portion and a propeller with a rudder at its lower portion powered by the engine to propel and steer the boat, comprising:

a swivel shaft connected to the propeller to turn the propeller relative to the boat;

an actuator connected to the swivel shaft to rotate the swivel shaft;

a rotation angle sensor installed around an outer periphery of the swivel shaft and outputting a signal indicative of an angle of rotation of the swivel shaft, wherein the rotation angle sensor has a ring-like shape and is installed around the outer periphery of the swivel shaft in such a manner that a center of the rotation angle sensor is made equal to a center of rotation of the swivel shaft, and further wherein the rotation angle sensor comprises magnets having a ring-like shape fastened to the outer periphery of the swivel shaft and a detection coil fastened to an inner periphery of the swivel case; and

a controller that controls operation of the actuator based on at least the signal of the rotation angle sensor.

11. – 12. (Cancelled)

13. (Currently Amended) A system according to claim 10, further including:

a swivel case rotatably accommodating the swivel shaft and being formed with a recess to accommodate the actuator therein in such a manner that the actuator does not project outside a

profile of the outboard motor, obtained by looking down the outboard motor from ~~downward~~above in the vertical direction, regardless of a steered angle of the outboard motor.

14. (Original) A system according to claim 13, wherein the swivel case is formed with the recess having a box-like shape to accommodate the actuator therein in such a manner that a longitudinal direction of the actuator is positioned on a diagonal of a rectangle of the recess.

15. (Currently Amended) A system according to claim 13, wherein the actuator is accommodated in the recess ~~by supported by~~ supports comprising a first support that supports the actuator at its upper portion thereof and a second support that supports the actuator at its lower portion thereof.

16. (Original) A system according to claim 10, wherein the actuator is a hydraulic cylinder and including:

a hydraulic pressure supplier that supplies hydraulic pressure to the hydraulic cylinder;
and

a hydraulic pressure reliever that relieves hydraulic pressure when change of hydraulic pressure of the hydraulic pressure supplier exceeds a predetermined value.

17. (Original) A system according to claim 16, wherein the hydraulic pressure reliever comprises:

a moving orifice installed in the hydraulic pressure supplier; and
a relief oil path installed in the hydraulic pressure supplier connecting hydraulic pressure
to an oil tank.

18. – 26. (Cancelled)